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| 10/699,275 | 10/31/2003 | Steve O'Hara | 100205023-1 | 2047 |

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EXAMINER

VO, ANH T N

ART UNIT PAPER NUMBER

2861

DATE MAILED: 06/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/699,275

Applicant(s)

O'HARA ET AL.

Examiner

Anh T.N. Vo

Art Unit

2861

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 9-22 and 24-27 is/are rejected.
- 7) ☐ Claim(s) 8 and 23 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 11/03/2003.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: ____.

DETAILED ACTION

Information Disclosure Statement

The references cited on PTO 1449 have been considered.

Double patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims Claims 1-2, 5, 6, 9, 12-13, 15-17, and 19 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 2-3, 5, 9-10, 12-14, 21-22, 30-31 of application number 10/698,088. Although the conflicting claims are not identical, they are not patentably distinct from each other because they claim a print cartridge comprising:

- a cartridge body ;
- a print head;
- a contact array;
- a first pair of columnar arrays of contact areas and a second pair of columnar arrays of contact areas disposed on a vertical wall of the cartridge body;
- the columnar arrays of each pair converging toward each other in a direction toward a lower portion of the cartridge body

This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

CLAIM REJECTIONS

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

Claims 1-6, 10, 12-16, 19-22, and 24-27 are rejected under 35 USC 102 (b) as being anticipated by Inoue et al. (US Pat. 5,971,525).

Inoue et al. disclose in Figures 3-4 , 7-9, 21-22, and 24-25B an inkjet head cartridge comprising:

- a cartridge body (301) having a lower portion and a vertical wall;
- a printhead (301a) attached to the lower portion (Figures 7-9);
- a contact array (301c) having a first pair of columnar arrays of contact areas and a second pair of columnar arrays of contact areas disposed on the vertical wall, the columnar arrays extending along at least one half of a height of a region occupied by the contact array, the columnar arrays of each pair converging toward each other in a direction toward the lower portion (Figure 9).
- wherein less than one-half of the contact areas are positioned in a lower half of the region occupied by the contact array (301c) (Figure 9);
- wherein the contact array (301c) further includes a row of contact areas substantially perpendicular to each of the columnar arrays (Figure 9).
- wherein at least one of the columnar arrays (301c) of contact areas is substantially nonlinear (Figure 9);
- wherein each of the pairs of columnar arrays includes at least one ground contact area (not shown);
- conductive traces (not shown) that electrically connect the ground contact areas to the printhead;
- wherein the contact areas are asymmetrically spaced (Figure 9);
- wherein the plurality of columns of contact areas comprise four columns of contact areas (Figure 9); and
- wherein the row of contact areas is positioned in an upper half of the region occupied by the contact array (Figures 7- 9).

Claim Rejections - 35 U.S.C. § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 7, 9, 11 and 17 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Inoue et al. (US Pat. 5,971, 525) in view of Childers (US Pat. 5,411,343).

Inoue et al. disclose the basic features of the claimed invention were stated above but do not disclose each of outermost transversely separated columnar arrays include more contact areas than columnar arrays between the outermost transversely separated columnar arrays the region that is occupied by the contact array has a width of less than about 12 mm and/or adjacent contact areas are spaced in a range of about 1 to 3 mm (column 3, lines 10-11).

Childers discloses in Figure 1 an ink jet print head cartridge (20) comprising:

- each of outermost transversely separated columnar arrays (28) include more contact areas than columnar arrays between the outermost transversely separated columnar arrays; and
- the region occupied by the contact array has a width of less than about 12 mm and/or adjacent contact areas are spaced in a range of about 1 to 3 mm (column 3, lines 10-11).

Citation of Pertinent Prior Art

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art references (US Pat. 5,589,859; US Pat. 4,907,018; US Pat. 5,852,460) in the PTO 892 form show an ink jet head cartridge) that is deemed to be relevant to the present invention. These references should be reviewed.

Allowable Subject Matter

Claim 8 would be allowable if rewritten to include all of the limitations of the base claim and any intervening claims. This claim would be allowable because none of the prior art references of record discloses a print cartridge comprising the region occupied by the contact array has a height of about 13.7 mm and width of about 11.3 mm.

in the combination as claimed.

Claim 23 would be allowable if rewritten to include all of the limitations of the base claim and any intervening claims. This claim would be allowable because none of the prior art references of record discloses an interconnect circuit comprising the flexible substrate that is a 48 mm substrate in the combination as claimed.

CONCLUSION

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Anh Vo, whose telephone number is (703) 305-8194. The examiner can normally be reached on Monday to Friday from 8:00 A.M. to 4:00 P.M. The fax number of this Group 2861 is (703) 305-3431 or 305-3432.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956.


ANH T.N. VO
PRIMARY EXAMINER
June 9, 2005